



# **STIC Search Report**

## **EIC 2100**

**STIC Database Tracking Number: 140672**

**TO: Fred Ehichoya**  
**Location: RND 3B31**  
**Art Unit : 2162**  
**Friday, December 17, 2004**

**Case Serial Number: 09/783787**

**From: David Holloway**  
**Location: EIC 2100**  
**RND 4B19**  
**Phone: 2-3528**

**david.holloway@uspto.gov**

### **Search Notes**

Dear Examiner Ehichoya,

Attached please find your search results for above-referenced case.  
Please contact me if you have any questions or would like a re-focused search.

David

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: FRED EHICHIOYA Examiner #: 79719 Date: 12/17/04  
 Art Unit: 121674 Phone Number 30 2-4034 Serial Number: 091783, 181  
 Mail Box and Bldg/Room Location: RAN 3631 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: SYSTEM AND METHOD FOR DATA MIGRATION

Inventors (please provide full names): RAVISENKAAR PUDIPEDDI et al.

Earliest Priority Filing Date: 2/15/2001

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- designating a quantity of said plurality of media as being in the writeable state, said quantity being equal to a concurrency value.
- designating an additional one of said plurality of media as being in the writeable state whereby the aggregate number of media in the writeable state exceeds said concurrency value.
- identifying a first medium located outside of said device, the identified medium being in the writeable state
- determining that the amount of time has passed without the identified medium having been placed in said device.

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>11-12-04</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: <u>2 3528</u>	AA Sequence (#) _____	Dialog <u>11.43%</u>
Searcher Location: <u>RND 4314</u>	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>12-17</u>	Bibliographic <u>✓</u>	Dr. Link _____
Date Completed: <u>12-17-04</u>	Litigation <u>✓</u>	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext <u>✓</u>	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet <u>✓</u>
Online Time: <u>6.5</u>	Other _____	Other (specify) _____

Set	Items	Description
S1	1674372	MEDIA? OR RESOURCE? OR SOURCE? OR ORIGIN? OR SENDING?
S2	76380	(CONCURRENC? OR MAXIMUM? OR HIGHEST? OR BENCHMARK? OR CEILING? OR GREATEST? OR QUANTIT? OR MAX) (2N) (S1 OR NUMBER? OR VALUE? OR AMOUNT)
S3	1225438	MIRROR? OR BACKUP OR BACK?()UP? ? OR MIGRAT? OR TRANSFER?
S4	41841	(MULTIPL? OR PLURAL OR PLURALITY OR MANY OR SEVERAL OR DIFFERENT OR VARIOUS OR VARIETY OR SOME) (3N) (MEDIA? OR DISK? ? OR DISC? ? OR TAPE? OR CD OR CDROM? OR CDS)
S5	57	CONCURRENC? (2N) (VALUE? OR ALGORITHM? OR FIGURE? OR NUMBER? OR QUANTIT? OR AMOUNT?)
S6	6	S5 AND S3
S7	1	S4 AND S5
S8	14	(S1 OR DATA OR INFORMATION? OR FILE? OR DATAFILE?) (5N) S5
S9	17	S6 OR S7 OR S8
S10	11	S9 AND IC=(G06F? OR H04L?)
S11	11	IDPAT (sorted in duplicate/non-duplicate order).
S12	11	IDPAT (primary/non-duplicate records only)

File 347:JAPIO Nov 1976-2004/Aug(Updated 041203)

(c) 2004 JPO & JAPIO

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200481

(c) 2004 Thomson Derwent

12/5/8 (Item 8 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

011699589 \*\*Image available\*\*  
WPI Acc No: 1998-116499/199811  
XRPX Acc No: N98-093411

Data concurrence system for computer system - has second database  
provided in request origin system that is updated based on searched data  
in order to achieve data concurrence with other system

Patent Assignee: NEC SOFTWARE KYUSHU LTD (KYUN )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 10003418	A	19980106	JP 96153637	A	19960614	199811 B

Priority Applications (No Type Date): JP 96153637 A 19960614

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10003418	A		5	G06F-012/00	

Abstract (Basic): JP 10003418 A

The system includes an information production unit (101) which searches a first database (102) based on the request from a request origin system (200). The information production unit produces the updating list of data.

A retrieval unit (201) of the request origin system compares the list information and data of a second database and searches the data to be demanded. The second database is updated based on searched data and data of the mutual systems are set to be in accord.

ADVANTAGE - Shortens time taken for data concurrence . Reduces amount of data forwarded between systems.

Dwg.1/3

Title Terms: DATA; CONCURRENT; SYSTEM; COMPUTER; SYSTEM; SECOND; DATABASE;  
REQUEST; ORIGIN; SYSTEM; UPDATE; BASED; SEARCH; DATA; ORDER; ACHIEVE;  
DATA; CONCURRENT; SYSTEM

Derwent Class: T01

International Patent Class (Main): G06F-012/00

International Patent Class (Additional): G06F-015/16

File Segment: EPI

Set	Items	Description
S1	1674372	MEDIA? OR RESOURCE? OR SOURCE? OR ORIGIN? OR SENDING?
S2	76380	(CONCURRENC? OR MAXIMUM? OR HIGHEST? OR BENCHMARK? OR CEILING? OR GREATEST? OR QUANTIT? OR MAX) (2N) (S1 OR NUMBER? OR VALUE? OR AMOUNT)
S3	1225438	MIRROR? OR BACKUP OR BACK?()UP? ? OR MIGRAT? OR TRANSFER?
S4	41841	(MULTIPL? OR PLURAL OR PLURALITY OR MANY OR SEVERAL OR DIFFERENT OR VARIOUS OR VARIETY OR SOME) (3N) (MEDIA? OR DISK? ? OR DISC? ? OR TAPE? OR CD OR CDROM? OR CDS)
S5	19	S2 AND S3 AND S4
S6	5	S5 AND IC=G06F?
S7	181	S2 AND S4
S8	39	S7 AND IC=G06F?
S9	1	S5 AND IC=H04L?
S10	39	S6 OR S8 OR S9
S11	39	IDPAT (sorted in duplicate/non-duplicate order)
S12	38	IDPAT (primary/non-duplicate records only)

File 347:JAPIO Nov 1976-2004/Aug(Updated 041203)  
(c) 2004 JPO & JAPIO

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200481  
(c) 2004 Thomson Derwent

12/5/5 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

014596463

WPI Acc No: 2002-417167/200244

XRPX Acc No: N02-328291

Computer system data backup by interleaving data from disk drive/array to tape drive where the used bits are located in at least one data block and the interleaved data includes only used bits from the plurality of tape drives

Patent Assignee: MIRAPPOINT INC (MIRA-N)

Inventor: DIMARTINO J L; KOHLI J; MCNEIL D D

Number of Countries: 098 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200235352	A2	20020502	WO 2001US45489	A	20011025	200244 B
AU 200233949	A	20020506	AU 200233949	A	20011025	200257
US 6691212	B1	20040210	US 2000697893	A	20001026	200413
EP 1402366	A2	20040331	EP 2001984949	A	20011025	200424
			WO 2001US45489	A	20011025	
US 20040068630	A1	20040408	US 2000697893	A	20001026	200426
			US 2003678455	A	20031003	
JP 2004522217	W	20040722	WO 2001US45489	A	20011025	200448
			JP 2002538271	A	20011025	

Priority Applications (No Type Date): US 2000697893 A 20001026; US 2003678455 A 20031003

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200235352 A2 E 22 G06F-011/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200233949 A G06F-011/00 Based on patent WO 200235352

US 6691212 B1 G06F-012/00

EP 1402366 A2 E G06F-011/14 Based on patent WO 200235352

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

US 20040068630 A1 G06F-012/16 Cont of application US 2000697893

Cont of patent US 6691212

JP 2004522217 W 38 G06F-003/06 Based on patent WO 200235352

Abstract (Basic): WO 200235352 A2

NOVELTY - Interleaving data from the primary data sources (Disk drive) in the secondary data source (Tape drive). Determining amount of used bits from each primary data source and the maximum size of a data block to be analyzed from the primary data sources and writing only used bits to the secondary data source during a transfer. The used bits are located in at least one data block and the interleaved data includes only used bits from the plurality of tape drives.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) A backup file.

(2) A backup and restore system.

USE - Backing up data from computer disks performed to recover from inadvertent user deletions/overwrites or from disk hardware failure.

ADVANTAGE - Optimizes the performance of backup and restore operations from primary to secondary data sources such as disk drives/arrays and tape drives respectively.

pp; 22 DwgNo 0/4

Title Terms: COMPUTER; SYSTEM; DATA; INTERLEAVED; DATA; DISC; DRIVE; ARRAY; TAPE; DRIVE; BIT; LOCATE; ONE; DATA; BLOCK; INTERLEAVED; DATA; BIT; PLURAL; TAPE; DRIVE

Derwent Class: T01; T03

International Patent Class (Main): G06F-003/06 ; G06F-011/00 ;  
G06F-011/14 ; G06F-012/00 ; G06F-012/16

File Segment: EPI

12/5/8 (Item 8 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

012773882 \*\*Image available\*\*  
WPI Acc No: 1999-580109/199949  
XRPX Acc No: N99-428290

Back up **apparatus for network connected computer**

Patent Assignee: DANTZ DEV CORP (DANT-N)

Inventor: ZULCH R C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5966730	A	19991012	US 96741620	A	19961030	199949 B

Priority Applications (No Type Date): US 96741620 A 19961030

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5966730	A	14	G06F-011/20	

Abstract (Basic): US 5966730 A

NOVELTY - A storage data controller compiles a list of data sources and its dated information to media paths, for all the network connected computers. The last **backed up** source is prioritized to the **media** path with **highest** priority, based on the dated information, and the **backup** media is connected along the source to the media paths, based on priority.

DETAILED DESCRIPTION - Atleast one of the data sources of each network connected computer is stored in a **backup** media. The dated data of the data source include date information related to last **backup** date.

USE - For network connected computer.

ADVANTAGE - Since controlled redundancy of data is maintained, loss of unique data is avoided. Offers fully automated **backup** which when once programmed does not require constant monitoring by supervisor. The administrator does not have to change system settings or scripts when inserting **different** storage **media**, since presence of new media redefines the prioritized source to media paths. The prioritization scheme ensures that, if a particular computer is not **backed up**, the process advances to the next **backup** session until it is eventually copied completely, thereby eliminating the conventional starvation problem. Prevents a script's active or inactive schedule from uselessly initiating a **backup** just before the script becomes inactive.

DESCRIPTION OF DRAWING(S) - The figure shows logic operation flow diagram of complete **backup** execution.

pp; 14 DwgNo 5A/6

Title Terms: BACK; UP; APPARATUS; NETWORK; CONNECT; COMPUTER

Derwent Class: T01; U21

International Patent Class (Main): G06F-011/20

International Patent Class (Additional): G06F-011/16 ; G06F-017/30

File Segment: EPI



12/5/14 (Item 14 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

011111560 \*\*Image available\*\*  
WPI Acc No: 1997-089485/199709  
XRPX Acc No: N97-073580

Data storage method for striping data across multiple discs - in which data is partitioned into data units which are striped across primary storage area of multiple discs , and back - up copy is made across back - up area of other discs

Patent Assignee: AT & T IPM CORP (AMTT ); LUCENT TECHNOLOGIES INC (LUCE )

Inventor: MOURAD A N

Number of Countries: 005 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 755009	A2	19970122	EP 96305095	A	19960710	199709 B
JP 9114605	A	19970502	JP 96185827	A	19960716	199728
US 5678061	A	19971014	US 95504096	A	19950719	199747

Priority Applications (No Type Date): US 95504096 A 19950719

Cited Patents: No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
-----------	------	-----	----	----------	--------------

EP 755009	A2	E	15	G06F-011/10	
-----------	----	---	----	-------------	--

Designated States (Regional): DE FR GB

JP 9114605	A	14	G06F-003/06
------------	---	----	-------------

US 5678061	A	15	G06F-015/02
------------	---	----	-------------

Abstract (Basic): EP 755009 A

The method of storing data in a number of discs involves dividing the storage area of each of the discs into primary and secondary sections, and partitioning the data into a number of successive blocks of data in sequence in respective ones of the primary sections. The successive blocks of data that have been stored in one of the primary sections are stored in sequence in respective secondary sections of the other of the discs in a round robin sequence.

Within a time cycle, a data block is accessed from different discs for respective users, and the accessed data blocks are stored in respective data buffers. Within a next time cycle, the data stored in the buffers is read and supplied to respective users.

USE - Striping (interleaving) data e.g video program, across multiple discs to improve concurrent access by several different users.

ADVANTAGE - Improves reliability of supplying data stored in number of different memories to different users.

Dwg.2/8

Title Terms: DATA; STORAGE; METHOD; STRIPE; DATA; MULTIPLE; DISC; DATA; PARTITION; DATA; UNIT; STRIPE; PRIMARY; STORAGE; AREA; MULTIPLE; DISC; BACK; UP; COPY; MADE; BACK; UP; AREA; DISC

Derwent Class: T01; T03

International Patent Class (Main): G06F-003/06 ; G06F-011/10 ;

G06F-015/02

International Patent Class (Additional): G11B-020/18; H04M-011/00

File Segment: EPI

12/5/18 (Item 18 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

009934573 \*\*Image available\*\*  
WPI Acc No: 1994-202285/199425  
XRPX Acc No: N94-159129

Management procedure for computer files - involves updating version  
number by one when all storage are available and updating by two if one  
is not available

Patent Assignee: BULL SA (SELA )  
Inventor: CAYUELA R; VILLETTE M; RAYUELA R  
Number of Countries: 009 Number of Patents: 005  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 604311	A1	19940629	EP 93403132	A	19931221	199425 B
FR 2699708	A1	19940624	FR 9215520	A	19921222	199428
EP 604311	B1	19970312	EP 93403132	A	19931221	199715
US 5613107	A	19970318	US 93169403	A	19931220	199717
DE 69308790	E	19970417	DE 608790	A	19931221	199721
			EP 93403132	A	19931221	

Priority Applications (No.Type Date): FR 9215520 A 19921222  
Cited Patents: 03Jnl.Ref

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 604311	A1	F	7	G06F-011/00	
Designated States (Regional): BE CH DE FR GB IT LI NL					
EP 604311	B1	F	8	G06F-011/00	
Designated States (Regional): BE CH DE FR GB IT LI NL					
US 5613107	A		7	G06F-013/00	
DE 69308790	E			G06F-011/00	Based on patent EP 604311
FR 2699708	A1			G06F-015/405	

Abstract (Basic): EP 604311 A

The file management procedure updates the file by incrementing the version number of the file, which is held on at least two bulk storage. In normal operation version number is incremented by one, and all bulk storage are updated after election of a master version (MV), which is rewritten to each of the bulk storage.

If a bulk storage is not available, the other available storage are updated and the version number of the master incremented by two. This ensures that if the previous version is updated from another storage while the master is not available the master carries the **highest version number**.

ADVANTAGE - Accommodates intermittent faults on bulk storage media to ensure that latest version of file will be correctly identified by its version number when faulty storage resumes operation.

Dwg.2A/2

Title Terms: MANAGEMENT; PROCEDURE; COMPUTER; FILE; UPDATE; VERSION; NUMBER ; ONE; STORAGE; AVAILABLE; UPDATE; TWO; ONE; AVAILABLE

Derwent Class: T01

International Patent Class (Main): G06F-011/00 ; G06F-013/00 ;

G06F-015/405

International Patent Class (Additional): G06F-011/18

File Segment: EPI

12/5/31 (Item 31 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

04233119 \*\*Image available\*\*  
ALLOCATION CONTROL SYSTEM FOR MAGNETIC TAPE DEVICE

PUB. NO.: 05-224819 [JP 5224819 A]  
PUBLISHED: September 03, 1993 (19930903)  
INVENTOR(s): OKAMOTO FUMITAKA  
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 04-029385 [JP 9229385]  
FILED: February 17, 1992 (19920217)  
INTL CLASS: [5] G06F-003/06 ; G06F-003/06  
JAPIO CLASS: 45.3 (INFORMATION PROCESSING -- Input Output Units); 42.5  
(ELECTRONICS -- Equipment)  
JOURNAL: Section: P, Section No. 1658, Vol. 17, No. 673, Pg. 126,  
December 10, 1993 (19931210)

#### ABSTRACT

PURPOSE: To send a request to alter the allocation of magnetic tape devices according to the number of jobs in magnetic tape device wait states on respective host systems in a multi-host system wherein **plural** magnetic **tape** devices are used between the host devices, and to automatically alter the allocation when there is a free magnetic tape device on another host system.

CONSTITUTION: A timer control means 13 makes a **resource** wait job **quantity** acquiring-means 12 to periodically acquire the number of jobs waiting for the magnetic tape devices 5 and 6 and displays the number of waiting jobs on an operation monitor terminal 3 through a **resource** waiting job **quantity** display means 11 when the number of waiting jobs exceeds a specified value. Namely, when the number of waiting jobs exceeds the specified value, a resource allocating means 14 inquires resource releasing means 25 of other host systems about whether or not there is the free magnetic tape device and then, incorporates it in its host system when the free magnetic tape device is present.

12/5/32 (Item 32 from file: 347)  
DIALOG(R) File 347: JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

04049309 \*\*Image available\*\*  
LOADING AND UNLOADING DEVICE FOR LARGE AMOUNT OF STORAGE MEDIA

PUB. NO.: 05-041009 [JP 5041009 A]  
PUBLISHED: February 19, 1993 (19930219)  
INVENTOR(s): OSADA NOBORU  
APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 03-194557 [JP 91194557]  
FILED: August 03, 1991 (19910803)  
INTL CLASS: [5] G11B-015/68; G06F-003/06  
JAPIO CLASS: 42.5 (ELECTRONICS -- Equipment); 45.3 (INFORMATION PROCESSING  
-- Input Output Units)  
JOURNAL: Section: P, Section No. 1563, Vol. 17, No. 335, Pg. 107, June  
24, 1993 (19930624)

#### ABSTRACT

PURPOSE: To improve efficiency of a loading/unloading processing with respect to the loading/unloading device for large amount of storage media, having plural magazine loading parts/unloading parts wherein the magazines capable of housing the plural recording media are loaded/unloaded, and successively loading/unloading the recording media to a library device from the magazine loading parts/unloading parts.

CONSTITUTION: The device is constituted so as to provide with means 15, 16 to select whether the loading/unloading process is stopped or the process is continued by other magazine loading part 11/unloading part 12, when a failure is generated in the process of loading/unloading operation. Or again, it is provided with a means 17 to set the quantity of unloaded storage media against the magazine part 12 and constituted so that the storage media remained in the library device are unloaded to the other magazine unloading part 12 after the quantity of storage media unloading to the magazine unloading part 12 attains to the quantity set by the above-mentioned means 17.

12/5/35 (Item 35 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

03279171 \*\*Image available\*\*  
METHOD FOR DRIVING HARD DISK DEVICE

PUB. NO.: 02-254671 [JP 2254671 A]  
PUBLISHED: October 15, 1990 (19901015)  
INVENTOR(s): IIZUMI TOMOO  
TOYAMA TAKASHI  
KUWABARA ISAO  
APPLICANT(s): ALPS ELECTRIC CO LTD [001009] (A Japanese Company or  
Corporation), JP (Japan)  
APPL. NO.: 01-075008 [JP 8975008]  
FILED: March 29, 1989 (19890329)  
INTL CLASS: [5] G11B-019/02; G06F-003/06  
JAPIO CLASS: 42.5 (ELECTRONICS -- Equipment); 45.3 (INFORMATION PROCESSING  
-- Input Output Units)  
JAPIO KEYWORD: R131 (INFORMATION PROCESSING -- Microcomputers &  
Microprocessors)  
JOURNAL: Section: P, Section No. 1150, Vol. 15, No. 11, Pg. 37,  
January 10, 1991 (19910110)

#### ABSTRACT

PURPOSE: To extend a hard disk device without increasing the number of signal lines for connection by setting the **maximum number** of cylinders of the hard disk device beforehand and executing a changeover to the next hard disk device each time the value is counted up.

CONSTITUTION: **Plural** hard **disk** devices 9 are connected in series, a track formed to the disk is recognized as a series of series numbers, a step signal STEP to designate the number of steps up to the number of tracks after a change from a present value and a direction signal DIR to designate whether to add or subtract the number of steps are outputted from a controller 10, and the hard disk device 9, in which the corresponding track is positioned, is selected out of the hard disk devices 9 connected in series by a CPU 15 based on the signals. Namely, the number of steps to be designated is counted in the adding or subtracting direction to be designated, the hard disk device to contain the number of tracks at the count completion value is selected as a use object out of the devices connected in series, thereby, a disk device selecting signal is made unnecessary, and simultaneously, the number of signal lines can be decreased.

Set	Items	Description
S1	6227336	MEDIA? OR RESOURCE? OR SOURCE? OR ORIGIN? OR SENDING?
S2	192954	(CONCURRENC? OR MAXIMUM? OR HIGHEST? OR BENCHMARK? OR CEIL- ING? OR GREATEST? OR QUANTIT? OR MAX) (2N) (S1 OR NUMBER? OR VA- LUE? OR AMOUNT)
S3	2818349	MIRROR? OR BACKUP OR BACK?()UP? ? OR MIGRAT? OR TRANSFER?
S4	100240	(MULTIPL? OR PLURAL OR PLURALITY OR MANY OR SEVERAL OR DIF- FERENT OR VARIOUS OR VARIETY OR SOME) (3N) (MEDIA? OR DISK? ? OR DISC? ? OR TAPE? OR CD OR CDROM? OR CDS)
S5	111	S2 AND S3 AND S4
S6	89	S5 AND S1
S7	62	RD (unique items)
S8	53	S7 NOT PY>2001
S9	53	S8 NOT PD>20010215
File	8: Ei Compendex(R) 1970-2004/Dec W1	(c) 2004 Elsevier Eng. Info. Inc.
File	35: Dissertation Abs Online 1861-2004/Nov	(c) 2004 ProQuest Info&Learning
File	202: Info. Sci. & Tech. Abs. 1966-2004/Nov 02	(c) 2004 EBSCO Publishing
File	65: Inside Conferences 1993-2004/Dec W2	(c) 2004 BLDSC all rts. reserv.
File	2: INSPEC 1969-2004/Dec W1	(c) 2004 Institution of Electrical Engineers
File	94: JICST-EPlus 1985-2004/Nov W1	(c) 2004 Japan Science and Tech Corp(JST)
File	111: TGG Natl. Newspaper Index(SM) 1979-2004/Dec 15	(c) 2004 The Gale Group
File	233: Internet & Personal Comp. Abs. 1981-2003/Sep	(c) 2003 EBSCO Pub.
File	6: NTIS 1964-2004/Dec W1	(c) 2004 NTIS, Intl Cpyrght All Rights Res
File	144: Pascal 1973-2004/Dec W1	(c) 2004 INIST/CNRS
File	34: SciSearch(R) Cited Ref Sci 1990-2004/Dec W2	(c) 2004 Inst for Sci Info
File	99: Wilson Appl. Sci & Tech Abs 1983-2004/Nov	(c) 2004 The HW Wilson Co.
File	95: TEME-Technology & Management 1989-2004/Jun W1	(c) 2004 FIZ TECHNIK

9/3,K/14 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

5954014 INSPEC Abstract Number: C9808-6130M-013

Title: Study of algorithms about storage allocation of video stream in video server

Author(s): Liu Heng-Zhu; Chen Xu-Can; Chen Fu-Jie

Author Affiliation: Sch. of Comput, Nat. Univ. of Defense Technol., Changsha, China

Journal: Chinese Journal of Computers vol.21, no.4 p.289-95

Publisher: Science Press,

Publication Date: April 1998 Country of Publication: China

CODEN: JIXUDT ISSN: 0254-4164

SICI: 0254-4164(199804)21:4L.289:SAAS;1-O

Material Identity Number: B714-98006

Language: Chinese

Subfile: C

Copyright 1998, IEE

...Abstract: on the market. But these systems all reserve the majority of the system's device **resources** in order to assure a certain number of video stream to be played back simultaneously...

... the depth study of the VOD support technology to make full use of the system **resource**. In this paper, in order to make full use of disk storage space and **transfer** bandwidth we put forward a quantitative study of video streams storage and under the constraint of guaranteeing video playback rates present a merging technique for storing **multiple** videos on **disk**. A model that relates disk characteristics to the video stream playback rate is described, a...

... of how to store multiple video streams on a disk and algorithms for storage of **maximum number** of video stream that need to be played back simultaneously on a disk are presented...

Set	Items	Description
S1	6227336	MEDIA? OR RESOURCE? OR SOURCE? OR ORIGIN? OR SENDING?
S2	192954	(CONCURRENC? OR MAXIMUM? OR HIGHEST? OR BENCHMARK? OR CEILING? OR GREATEST? OR QUANTIT? OR MAX) (2N) (S1 OR NUMBER? OR VALUE? OR AMOUNT)
S3	2818349	MIRROR? OR BACKUP OR BACK?()UP? ? OR MIGRAT? OR TRANSFER?
S4	100240	(MULTIPL? OR PLURAL OR PLURALITY OR MANY OR SEVERAL OR DIFFERENT OR VARIOUS OR VARIETY OR SOME) (3N) (MEDIA? OR DISK? ? OR DISC? ? OR TAPE? OR CD OR CDROM? OR CDS)
S5	111	S2 AND S3 AND S4
S6	154680	(IMAGE? OR VIDEO? OR MULTIMEDIA? OR MEDIA OR GRAPHIC? OR DATABASE? OR DATA OR DATABANK? OR INFORMATION? OR FILE? OR DATAFILE) (3N) (S3 OR OFFSITE()STORAGE? OR STORAGE()AREA()NETWORK?)
S7	6751	CONCURREN? (2N) (FIGURE? OR AMOUNT? OR NUMBER? OR VALUE? OR ALGORITHM? OR FORMULA? OR CALCULAT?)
S8	2860946	MAX OR MAXIMUM OR LIMIT OR CEILING OR BENCHMARK? OR MAX OR UPPER
S9	66	S6 AND S7
S10	9	S8 AND S9
S11	5	S4 AND S9
S12	0	S5 AND S7
S13	3	S2 AND S6 AND S7
S14	17	S10 OR S11 OR S13
S15	12	RD (unique items)
S16	9	S15 NOT PY>2001
File	8: Ei Compendex(R) 1970-2004/Dec W1	(c) 2004 Elsevier Eng. Info. Inc.
File	35: Dissertation Abs Online 1861-2004/Nov	(c) 2004 ProQuest Info&Learning
File	202: Info. Sci. & Tech. Abs. 1966-2004/Nov 02	(c) 2004 EBSCO Publishing
File	65: Inside Conferences 1993-2004/Dec W2	(c) 2004 BLDSC all rts. reserv.
File	2: INSPEC 1969-2004/Dec W1	(c) 2004 Institution of Electrical Engineers
File	94: JICST-EPlus 1985-2004/Nov W1	(c) 2004 Japan Science and Tech Corp (JST)
File	111: TGG Natl. Newspaper Index (SM) 1979-2004/Dec 15	(c) 2004 The Gale Group
File	233: Internet & Personal Comp. Abs. 1981-2003/Sep	(c) 2003 EBSCO Pub.
File	6: NTIS 1964-2004/Dec W1	(c) 2004 NTIS, Intl Cpyrght All Rights Res
File	144: Pascal 1973-2004/Dec W1	(c) 2004 INIST/CNRS
File	34: SciSearch(R) Cited Ref Sci 1990-2004/Dec W2	(c) 2004 Inst for Sci Info
File	99: Wilson Appl. Sci & Tech Abs 1983-2004/Nov	(c) 2004 The HW Wilson Co.
File	95: TEME-Technology & Management 1989-2004/Jun W1	(c) 2004 FIZ TECHNIK



16/5/4 (Item 4 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
(c) 2004 Elsevier Eng. Info. Inc. All rts. reserv.

04241457 E.I. No: EIP95092839884

Title: **Framework for the storage and retrieval of continuous media data**  
Author: Ozden, Banu; Rastogi, Rajeev; Silberschatz, Avi  
Corporate Source: AT&T Bell Lab, Murray Hill, NJ, USA  
Conference Title: Proceedings of the International Conference on  
Multimedia Computing and Systems  
Conference Location: Washington, DC, USA Conference Date:  
19950515-19950518  
Sponsor: IEEE  
E.I. Conference No.: 43487  
Source: International Conference on Multimedia Computing and  
Systems-Proceedings 1995. IEEE, Los Alamitos, CA, USA, 95TH8066. p 2-13  
Publication Year: 1995  
CODEN: 002114  
Language: English  
Document Type: CA; (Conference Article) Treatment: A; (Applications); G  
; (General Review)  
Journal Announcement: 9510W5

Abstract: Continuous media applications require a guaranteed **transfer** rate of **data**, which conventional storage servers are not designed to provide. The aim of this paper is to provide a general framework for the design of storage servers that deal with both continuous and non-continuous **media data**. We present **several algorithms** for the **concurrent transfer** of continuous **media data** for **multiple** requests with different rates. The algorithms provide high throughput by reducing the seek latency time and by eliminating rotational latency incurred when accessing data on disks. Each of these algorithms is accompanied by an admission control scheme to restrict the **number** of **concurrent** requests being serviced at any given time. We also augment these algorithms to support conventional data accesses without violating the rate guarantees of continuous media data requests. Finally, we extend our algorithms to deal with the newer disks, where transfer rates vary from one track to another. The algorithms presented in this paper are used in Fellini - storage server for continuous and conventional data being implemented at AT&T Bell Laboratories. (Author abstract) 11 Refs.

Descriptors: **\*Information retrieval systems; Data transfer ; Data storage equipment; Algorithms; Data acquisition; Real time systems; Buffer storage; Data handling; Information retrieval; Concurrency control**

Identifiers: Continuous media data; Storage servers; Non continuous media data; Throughput; Seek latency time; Rotational latency; Admission control scheme; Fellini

Classification Codes:

903.3 (Information Retrieval & Use); 723.2 (Data Processing); 722.1 (Data Storage, Equipment & Techniques); 723.1 (Computer Programming); 722.4 (Digital Computers & Systems)  
903 (Information Science); 723 (Computer Software); 722 (Computer

01695573 ORDER NO: AAD99-22949

**DESIGN AND EVALUATION OF MULTI-PROTOCOL COMMUNICATION ON A CLUSTER OF SMP'S  
(SYMMETRIC MULTIPROCESSORS)**

Author: LUMETTA, STEVEN SAM

Degree: PH.D.

Year: 1998

Corporate Source/Institution: UNIVERSITY OF CALIFORNIA, BERKELEY (0028)

Chair: DAVID E. CULLER

Source: VOLUME 60/03-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 1169. 255 PAGES

Descriptors: COMPUTER SCIENCE

Descriptor Codes: 0984

Modern computers have deep and increasingly complex data hierarchies. The task of managing the motion of data between the levels is of prime importance, particularly with regard to communication. It requires a combination of automatic control and application-specific knowledge. Automatic control handles the bulk of the work, applying heuristics grounded in general principles and system parameters. Application-specific knowledge allows a program to make more effective use of the system, integrating the application's needs with the capabilities of the architecture. Striking a proper balance between these two approaches is not easy, and effective abstractions are a necessary aid in finding appropriate solutions.

This thesis addresses the management of data motion in the context of a cluster of symmetric multiprocessors, or SMP's. The shift from uniprocessors to multiprocessors as the basic unit of cluster computing reflects the trend toward deeper hierarchies of data, extending the hierarchy in a cluster of workstations with an intermediate level—the memory interconnect—at which processors communicate and share physical resources. The resulting systems, known as Clumps, offer potentially superior performance to applications capable of exploiting the tight coupling within each SMP. For some applications, however, resource contention and other interactions degrade performance relative to a cluster of uniprocessors.

We address interprocess communication on a Clump through a uniform message-passing interface that exposes the performance of the underlying hardware. The interface transparently routes messages through the appropriate medium, providing the necessary automatic control to allow a programmer to obtain reasonable performance with minimal effort, yet provides the locality information necessary to support the incremental use of application-specific knowledge.

In constructing our uniform interface, we carefully engineer and tune a transport protocol for passing messages across a cache-coherent interconnect, introducing in the process a new **concurrent queue algorithm** that obtains good performance on both dedicated and multiprogrammed machines. We integrate this protocol with a similarly well-engineered network protocol to present a uniform interface to programmers. We expose the problems involved with coupling protocols of disparate speed and present a solution that dynamically tunes our communication layer to the underlying architecture. Using both applications and **benchmarks** derived from the message-passing literature, we measure the performance of our system and highlight the phenomena that counteract the advantages of faster communication. Through a model of shared communication resources, we explain these same phenomena analytically.

The communication layer developed in this thesis demonstrates the value of a uniform interface in abstracting a hierarchy below the level addressed by an application programmer. The **concurrent queue algorithm** illustrates a good approach to the development of concurrent **data structures**, **backed up** by a wealth of performance comparisons. The dynamic adaptation solution also proves very effective, enabling applications to address a general Clump architecture, from an SMP to a NOW, with only a single binary. Similar solutions might be used to address a range of other problems. Taken in part, the shared memory protocol is also

a powerful building block for higher-level interfaces within an SMP.

Through the work described in this thesis, we develop an understanding of the issues for fast, user-level communication between processes in a Clump and for the broader problem of coupling levels of a hierarchical system within a single abstraction. of a hierarchical system within a single abstraction.

16/5/7 (Item 1 from file: 6)  
DIALOG(R)File 6:NTIS  
(c) 2004 NTIS, Intl Cpyrght All Rights Res. All rts. reserv.

2027215 NTIS Accession Number: AD-A328 394/2/XAB

**Efficient Parallel Semantic/O-O Database Management**

(Final rept)

Rishe, N.

Florida International Univ., Miami. School of Computer Science.

Corp. Source Codes: 056181003; 429243

Report No.: ARO-32427.32-MASDI

6 Jun 97 49p

Languages: English

Journal Announcement: GRAI9724

Product reproduced from digital image. Order this product from NTIS by:  
phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries);  
fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is  
located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A04/MF A01

Country of Publication: United States

Contract No.: DAAH04-94-G-0024

We have developed an optimistic concurrency control method for a  
massively parallel semantic database machine. Our **concurrency control  
algorithm** achieves very fine granularity, ensures serializability and  
external consistency, and uses local logical clocks which do not require  
physical clock synchronization. We have also developed a dynamic load  
balancing algorithm which repartitions data among processors using a  
fault-tolerant **data transfer** policy to produce a more evenly balanced  
load. We have implemented **benchmarks** on our experimental semantic  
database system that have shown it to be more than competitive with current  
commercial products. In addition to these results, we have continued to  
perform research on semantic databases. Our research into applying SQL to  
semantic databases has shown the advantages of the semantic binary model  
even when using standard relational languages.

Descriptors: \*Data bases; \*Data management; \*Computer **benchmarking** ;  
Algorithms; Load distribution; **Information transfer** ; Semantics;  
Synchronization(Electronics)

Identifiers: NTISDODXA; NTISDODA

Section Headings: 88B (Library and Information Sciences--Information  
Systems); 62B (Computers, Control, and Information Theory--Computer  
Software); 62D (Computers, Control, and Information Theory--Information  
Processing Standards)